

these discussions are provided to help the United States Patent and Trademark Office better appreciate important claim distinctions discussed thereafter.

Applicants' Invention

The present invention is directed to systems and methods for moving (or bumping) graphical components, such as windows, between the display regions of a graphical user interface. A selected graphical component, e.g., a window, is moved in response to a signal from an input device. Upon receipt of a movement signal, a destination location for the graphical user component is determined or located. Then, the graphical component is bumped to the destination location. The destination location is an open location. An open location includes an area of the display where no graphical component occupies. An open location may also be an existing graphical component, such as an icon or a window, which the user allows, by predetermination of the existing graphical component, to be covered by the graphical component to be moved. An open location may also be an area of an existing window in which no information is displayed, such as an area of the existing window that contains only white space. If multiple open locations are available, a decision is reached regarding which location is most desirable.

More specifically, in one form the invention is directed to a computer-implemented method of moving a graphical component from one location to another location in a graphical interface. The method comprises, in response to the selection of the graphical component, determining if the graphical component is to be moved from the current location of the graphical component to another location. If the graphical component is to be moved, the method comprises determining a destination location for the graphical component. The destination location comprises an open location in the graphical interface. The method then comprises

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moving the graphical component from the current location of the graphical component to the destination location.

U.S. Patent No. 6,654,036 B1 ("Jones")

Jones is purportedly directed to controlling the relative positioning of multiple windows displayed on an output device. Jones, Col. 1, lines 10-12. Jones discloses a method for "determining a likelihood that a user activity site in the active window will move into an obstructed position" (emphasis added). And if the likelihood exists, "a screen arrangement is reformatted so that the user activity site is contained in the viewable screen area" (emphasis added). Jones, Col. 1, lines 63-67. Jones further discloses a method wherein "the operation of the window positioning program 124 is at least partially defined by user selected parameters." Jones, Col. 5, lines 6-8. Jones discloses checkboxes selectable by a user. Jones further discloses that a first three checkboxes 204, 206, and 208 determine the manner in which windows are moved. Jones, Col. 5, lines 12-19. Jones further discloses that upon selection of the appropriate checkbox, a window is moved incrementally, overlapping windows are juxtaposed, or the user's active window is moved to the foreground. Jones, Col. 5, lines 20-32. Jones additionally discloses that "a user may specify a desired position of an active window and/or inactive window(s) which are moved in response to the dynamic rearrangement of the invention" (emphasis added). Jones, Col. 5, lines 49-52. This is in contrast to the present invention where a computer implemented method determines an open destination location in response to the selection of a graphical component to which the graphical component is to be moved.

In summary, Jones discloses a method a for rearranging multiple windows on a screen to prevent obstruction of a user's active window, in contrast to the present invention where a graphical component is bumped to a determined open location in response to the selection of the graphical component.

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US Patent No. 5,621,904 ("Elliott et al.")

Elliott et al. is purportedly directed to computer-implemented processes for positioning windows such that the display of other information is not obscured. Elliott et al., Col. 1, lines 9-11. Elliott et al. discloses an existing parent window 102 displaying information to a user and a new child window 103, such as a dialog box, displaying further information to the user related to the information appearing in the parent window 102. Elliott et al. discloses a method for positioning the child window 103 such that the information in the parent window 102 is not obscured. Elliott et al., Col. 1, lines 17-23, and Col. 2, lines 1-2. With reference to Figure 2, Elliott et al. discloses a method for determining the size and position of the parent window 202 and subsequently the size and position of the child window 203 such that the information in the parent window 202 is not obscured by the child window 203. Elliott et al., Col. 3, lines 12-30 and 49-57. This is contrast to the present invention where an existing graphical component is moved from a current position to a destination position in response to selection of the graphical component.

In summary, Elliott et al. discloses a method for sizing and positioning the new child window such that the information in the parent window is not obscured, in contrast to the present invention where existing graphical components, without regard to the components' parent-child relationships, are moved to a determined location on the screen.

U.S. Patent No. 6,573,913 ("Butler et al.")

Butler et al. is purportedly directed to repositioning and displaying an object in a multiple monitor environment. When two or more of the monitors have different color characteristics, overlapping images are processed in accordance with the particular color characteristics of the monitors to accommodate for the differences. An image displayed on a first monitor can be

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repositioned such that a first portion of the image is displayed on the first monitor and a second portion is displayed on the second monitor. When this occurs, the data representing a first portion of the image is moved from a first location to a second location in a frame buffer in a bit block transfer operation. If the first and second monitors have the same color characteristics, the data representing the second portion is also transferred using a bit block operation. However, if the color characteristics are different, the data representing the second portion of the image is passed through a display engine that adapts the data to the particular color characteristics of the second monitor.

Other than its disclosure of multiple monitors, as described more fully below, Butler et al. appears to have no relevance to the present invention.

US Patent No. 5,796,402 ("Ellison-Taylor")

Ellison-Taylor is purportedly directed to placement of windows on a computer screen. Ellison-Taylor, Col. 1, lines 12-14. Ellison-Taylor discloses a method for aligning and proportionally sizing windows to "tile" the windows covering the entire screen while preserving the relative sizes and positions of the windows. Ellison-Taylor, Col. 2, lines 13-19 and 22-24. Ellison-Taylor discloses a "tiling program that aligns the windows so that their sides touch and so that they fill a bounding window." Ellison-Taylor, Col. 3, lines 42-44.

In summary, Ellison-Taylor discloses a method for aligning and proportionally sizing windows to tile the windows on the screen, in contrast to the present invention where a graphical component is bumped to a new location on screen in response to the selection of the graphical component.

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Rejection of Claims 1, 3, 5, 6, 15-19, 21, 23/1, 23/3, 24/1, 24/3, and 25-27 Under 35 U.S.C. § 102(e)

As noted above, the Office Action rejected the above-mentioned claims as being anticipated by Jones.

Claim 1 recites, in its entirety:

A computer-implemented method of moving a graphical component from one location to another location in a graphical interface, the method comprising:

in response to the selection of a graphical component, determining if said graphical component is to be moved from the current location of the graphical component to another location;

if said graphical component is to be moved, determining a destination location for said graphical component, said destination location comprising an open location in said graphical interface; and

moving said graphical component from the current location of the graphical component to said destination location. (Emphasis added.)

Jones does not teach or suggest the selection of a graphical component. Jones also does not teach or suggest determining a destination location to which the graphical component is moved. Jones discloses a method for "determining a likelihood that a user activity site in the active window will move into an obstructed position" (emphasis added). And if the likelihood exists, "a screen arrangement is reformatted so that the user activity site is contained in the viewable screen area" (emphasis added). Jones, Col. 1, lines 63-67. Determining a likelihood that a user activity will move into an obstructed position is different from the selection of a graphical component. Furthermore, reformatting a screen arrangement in response to the existence of such likelihood is different from determining an open destination location to which the graphical component is moved, as recited by Claim 1. Jones further discloses that upon selection of one of a set of appropriate checkboxes, a window is moved incrementally, overlapping windows are juxtaposed, or the user's active window is moved to the foreground. Jones, Col. 5, lines 20-32. None of the above-mentioned manners of moving a window disclosed by Jones teach or suggest moving the graphical component to an open destination location.

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More specifically, incremental movement of a window necessitates, for a number of steps, continued overlap of a user's active window and an obstructing window. Juxtaposing of overlapping windows also necessitates continued overlap of the windows, but in a reversed order. Similarly, moving the user's active window to the foreground necessitates covering another window which was previously in the foreground. For example, Jones discloses user-selectable check-boxes 204 and 204B which indicate that an inactive window 304 is moved while an active window 302 remains fixed. In Figures 3B-3D of Jones two windows are shown where the incremental repositioning of the active window 302 results in the inactive window being moved to a different location on the screen in multiple, incremental steps, while in each step the inactive window 304 is shown to still overlap the active window 302. Jones, Col. 6, lines 12-16. In contrast, in the present invention, the movement of a graphic component takes place in a single step to an open location.

Additionally, Jones discloses a method wherein "the operation of the window positioning program is at least partially defined by user selected parameters" (emphasis added). Jones, Col. 5, lines 6-8. In contrast, the computer-implemented method recited by Claim 1 automatically determines a destination location, that is, without definition by the user. That is, the method recited by Claim 1 is a computer-implemented method, which implies that user intervention is not included in the method. Therefore, it is submitted that Claim 1 is allowable for at least the same reasons discussed above.

Claims 3, 5, 6, 15-18, 21, 23/1, 23/3, 24/1, and 24/3 depend from Claim 1 and are submitted to be allowable for at least the same reasons presented above with respect to Claim 1.

Claim 19 depends from Claim 1 via Claim 15 and is submitted to be allowable for at least the same reasons presented above with respect to Claim 1. Additionally, Claim 19 recites the "method of Claim 15, wherein said blocking graphical components include other graphical

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components accessed within a predetermined time period prior to determining a destination location for said graphical component." (Emphasis added.) Jones does not teach or suggest a blocking graphical component including other graphical components that are accessed within a predetermined time prior to determining a destination location. In Figures 5A and 5B, Jones discloses "an active window 502 ... located beneath an inactive window 504." Jones further discloses that "[u]pon detection that the user activity (determined by the position of the cursor) will move behind the inactive window 504, the active window 502 is moved" (emphasis added.) Jones does not indicate accessing "other graphical components" included in a blocking graphical component. Furthermore, Jones does not indicate a time period prior to moving the active window 502, let alone a predetermined time period, as recited by Claim 19. Therefore, Claim 19 is submitted to be allowable for these additional reasons.

Claim 25 recites, in its entirety:

In a computer system having a graphical user interface including a display and a user interface control device, a method of moving a window from one region of the display to another region of the display, said method comprising:

in response to user input received from said interface control device, determining that a window on said display is to be moved to another location;

automatically identifying an open destination location on said display for said window to be moved; and

automatically moving said window to said destination location on said display. (Emphasis added.)

As discussed above with respect to Claim 1, Jones does not teach or suggest a method automatically identifying an open destination location to which a window is moved. As noted above, Jones discloses a method for "determining a likelihood that a user activity site in the active window will move into an obstructed position." And, if the likelihood exists, "a screen arrangement is reformatted so that the user activity site is contained in the viewable screen area" (emphasis added). Jones, Col. 1, lines 63-67. As discussed above with respect to Claim 1, reformatting a screen arrangement in response to the existence of such likelihood is different

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from automatically identifying an open destination location to which the graphical component is moved, as recited by Claim 25. Jones further discloses that upon selection of one of a set of appropriate checkboxes, a window is moved incrementally, overlapping windows are juxtaposed, or the user's active window is moved to the foreground. Jones, Col. 5, lines 20-32. None of the above-mentioned manners of moving a window disclosed by Jones teach or suggest moving the graphical component to an open destination location. More specifically, incremental movement of a window necessitates, for a number of steps, continued overlap of a user's active window and an obstructing window. Juxtaposing of overlapping windows also necessitates continued overlap of the windows, but in a reversed order. Similarly, moving the user's active window to the foreground necessitates covering another window which was previously in the foreground. For example, Jones discloses user-selectable check-boxes 204 and 204B, which indicate that an inactive window 304 is moved while an active window 302 remains fixed. In Figures 3B-3D of Jones two windows are shown where the incremental repositioning of the active window 302 results in the inactive window being moved to a different location on the screen in multiple, incremental steps, while in each step the inactive window 304 is shown to still overlap the active window 302. Jones, Col. 6, lines 12-16. In contrast, in the present invention, the movement of a graphic component takes place in a single step to an open destination location.

Additionally, Jones discloses a method wherein "the operation of the window positioning program is at least partially defined by user selected parameters". Jones, Col. 5, lines 6-8. In contrast, Claim 25 recites "automatically identifying an open destination location" (emphasis added), that is, without definition by the user. Therefore, it is submitted that Claim 25 is allowable for at least the reasons discussed above.

Claims 26-27 depend from Claim 25 and are submitted to be allowable for at least the same reasons presented above with respect to Claim 25.

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Rejection of Claims 2, 7, 20, 23/20, 24/20 Under 35 U.S.C. § 103(a)

As noted above, the above-mentioned claims were rejected as being unpatentable over Jones. Claims 2, 7, 20, 23/20, 24/20 depend from Claim 1 and are submitted to be allowable for at least the same reasons as discussed above with respect to Claim 1. Additionally, Claim 2 recites: "receiving a desired direction for said destination." Jones does not teach or suggest receiving a desired direction for said destination. As noted above, Jones discloses that a screen arrangement is reformatted so that the user activity site is contained in the viewable screen area. Jones, col. 1, lines 63-67. Jones does not teach or suggest determining a destination, let alone a direction for said destination. Therefore, Claim 2 is submitted to be allowable for these additional reasons. Claim 7 recites: "said signal from an input device includes a desired direction." As discussed above, Jones does not teach or suggest determining a destination, let alone a direction for said destination. Therefore, Claim 7 is submitted to be allowable for these additional reasons. Claim 20 recites: "displaying an indication of said destination location." As noted above, Jones does not teach or suggest determining a destination location. Jones discloses a method for "determining a likelihood that a user activity site in the active window will move into an obstructed position." And if the likelihood exists, a screen arrangement is reformatted so that the user activity site is contained in the viewable screen area. Jones, Col. 1, lines 63-67. Jones does not teach or suggest determining a destination location, let alone displaying an indication of a destination location. Therefore, it is submitted that Claim 20 is allowable for these additional reasons. Claims 23/20 and 24/20 recite features similar to features recited by Claims 2 and 7 and, thus, are submitted to be allowable for at least these additional reasons presented above with respect to Claims 2 and 7.

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Rejection of Claims 8, 23/8, and 24/8 Under 35 U.S.C. § 103(a)

As noted above, the above-mentioned claims were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jones in view of Elliott. Claim 8 recites: "determining a destination location that lies a predetermined distance from the current location of the graphical component." (Emphasis added.) As noted above, Jones does not teach or suggest determining a destination location to which a window is moved, let alone a destination location that lies a predetermined distance from the current location. Elliot et al. does not supply the teachings missing from Jones. In Figure 2, Elliot et al. discloses a method for determining the size and position of a new child window 203 such that the information in the parent window 202 is not obscured by the child window 203. Elliott et al., Col. 3, lines 12-30 and 49-57. Elliot et al. discloses where on the screen a new child window is created initially, in contrast to the Claim 8 which recites where on the screen an existing graphical component is moved to. Therefore, Claim 8 is submitted to be allowable. Claims 23/8 and 24/8 recite features similar to features recited by Claim 8 and, thus, are submitted to be allowable for at least the reasons presented above with respect to Claim 8.

Rejection of Claims 4, 9-13, 22, 23/4, 23/9, 23/22, 24/4, 24/9, 24/22, and 28 Under 35 U.S.C. § 103(a)

As noted above, the above mentioned claims were rejected as being unpatentable over Jones in view of Butler et al.. Claim 4 recites: "determining that said destination is located in a display region with a new resolution, and automatically resizing said window in proportion to said new resolution." (Emphasis added.) As discussed above with respect to Claim 1, Jones does not teach or suggest determining a destination location to which a graphical component is moved. Butler et al. fails to supply the teachings missing from Jones. Butler et al. discloses that

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an image displayed on a first monitor can be repositioned such that a first portion of the image is displayed on the first monitor and a second portion is displayed on the second monitor. Butler et al., Col. 2, lines 13-17. Butler et al. does not teach or suggest determining a destination location to which a graphical component is moved, as recited by Claim 1 from which Claim 4 depends. Therefore, it is submitted that Claim 4 is allowable for at least the reasons discussed above. Similarly, Claims 9-13, 22, 23/4, 23/9, 23/22, 24/4, 24/9, and 24/22 depend from Claim 1 and are submitted to be allowable for at least the same reasons discussed above with respect to Claim 1. Claim 28 depends from Claim 25 and is submitted to be allowable for at least the same reasons discussed above with respect to Claim 25.

Rejection of Claim 29 Was Rejected Under 35 U.S.C. § 103(a)

As noted above, the above-mentioned claims were rejected as being unpatentable over Jones in view of Ellison-Taylor. Claim 29 recites: "window expands to fill the area of said optimal open destination." As stated by the Office Action, Jones does not teach or suggest that a window expands to fill the area of an open destination. Office Action, page 13, item 5. Ellison-Taylor fails to supply the teachings missing from Jones. Ellison-Taylor fails to supply the teachings missing from Jones. Ellison-Taylor discloses a method for aligning and proportionally sizing windows to "tile" the windows covering the entire screen while preserving the relative sizes and positions of the windows. Ellison-Taylor, Col. 2, lines 13-19 and 22-24. Ellison-Taylor does not teach or suggest filling the area of an open destination, which is a subset of the entire screen. Additionally, Claim 29 depends from Claim 25, which recites: "identifying an open destination location." As discussed above with respect to Claim 25, Jones does not teach or suggest identifying an open destination location. Ellison-Taylor fails to supply the teachings missing from Jones in this respect, as well. Therefore, it is submitted that Claim 29 is allowable for at least the reasons discussed above.

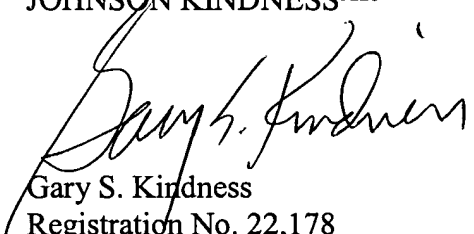
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CONCLUSION

In summary, applicants respectfully submit that all the claims in this application are clearly allowable in view of the disclosures of Jones, Elliot, Butler et al., and Ellison-Taylor, applied singly or in any motivated combination. As a result, applicants respectfully request that all of the claims remaining in this application be allowed and this application be passed to issue. If the Examiner has any question, the Examiner is invited to contact applicants' attorney at the number set forth below.

Respectfully submitted,

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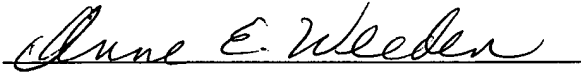


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